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Capitalist accounting in sixteenth century Holland

Hanseatic influences and the Sombart thesis

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Abstract

Purpose – The purpose of this paper is to examine sixteenth century Netherlands business organisation and accounting practices, then the most advanced in Western Europe, to test Sombart's theory that scientific double entry bookkeeping was an essential prerequisite for the development of modern capitalism and the emergence of the public corporation during the late sixteenth and early seventeenth centuries. Rather than being a development of Paciolian bookkeeping, double-entry bookkeeping in sixteenth century Netherlands was grounded in northern German (Hanseatic) business practices.

Design/methodology/approach – Sixteenth century Dutch business records and Dutch and German bookkeeping texts are used to establish that north German Hanseatic commercial practices exercised the greatest influence on The Netherlands' bookkeeping practices immediately prior to the development of the capitalistic commercial enterprise in the first years of the seventeenth century.

Findings – Contrary to Sombart's thesis, scientific double-entry bookkeeping was rarely used in sixteenth century Netherlands, which became Europe's most sophisticated commercial region during the late sixteenth century and early seventeenth century. Instead, extant commercial archives and the numerous sixteenth century accounting texts suggest that Hanseatic business practices and agents' (factors') bookkeeping were the dominant influence on northern Netherlands' business practices at this time. The organisation and administrative practices of Netherlands' businesses prior to the seventeenth century, especially their decentralised structure and lack of a common capital, were founded on Hanseatic practices that were considerably different to the best Italian practice of the time.

Research limitations/implications – North German influences on Dutch accounting and business practices have significant implications for social theories of the development of capitalism, notably that of Bryer, that assume the use of a scientific (capitalistic) form of double-entry bookkeeping was essential to the development of capitalism from the seventeenth century. This is tested in a subsequent paper which examines the accounting practices of the Dutch East India Company (Verenigde Oost-Indische Compagnie or VOC) which was founded in 1602 at the very cusp of modern capitalism. The research presented here was partially constrained by the scarcity of transcriptions of original sixteenth century bookkeeping records.

Originality/value – The vigorous debate in the accounting history literature about the dependence of modern capitalism upon a scientific (capitalistic) form of double entry bookkeeping prompted by Sombart has been mainly concerned with England. This paper introduces into the debate material which documents the accounting and business practices of the most commercially advanced region of Europe in the late sixteenth century and the influence of Dutch bookkeeping texts.

Keywords Sombart, Hanseatic League, Scientific double entry bookkeeping, Capitalist systems, The Netherlands

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Introduction

Momentous developments in accounting, such as the appearance of double entry bookkeeping, occur very infrequently. "It rarely is possible", observed Hopwood (1987,

p. 214), "to witness the birth pains of a newly emergent accounting". Yet moments of significant change in the existing accounting paradigm are of particular importance because their study enables historians to develop an acute understanding of what accounting was, and how it became what it is. Even more propitious are evolutionary shifts in the existing accounting paradigm[1] that occur in conjunction with a major advance in business structure (Cushing, 1989, pp. 9-20). Under these circumstances accounting history is presented with a unique opportunity to analyse the relationship between accounting and business organisation in the context of the wider social structures in which they are nurtured. One such critical conjuncture occurred in the last years of the sixteenth century and the first years of the seventeenth century, when medieval double-entry bookkeeping evolved into capital or scientific double entry accounting[2] and the public company was fashioned from the prevailing medieval business structures.

The Netherlands was amongst the first countries to adopt a capitalistic form of business organisation with the formation of the Dutch East India Company (Verenigde Oost-Indische Compagnie or VOC)[3]. Founded in 1602, this company was not only the most powerful and most successful business institution in the seventeenth century, it was also the world's first public company. Consequently, examining Netherlands' commercial organisation and bookkeeping practices which led the world from the late sixteenth century (Sombart, 1967, pp. 128, 144; Ten Have, 1933, p. 1; Chatfield and Vangermeersch, 1996, p. 128) and bookkeeping texts immediately prior to the formation of the VOC provides an exceptional opportunity long overlooked by accounting historians, mainly because of language barriers in a discipline which is heavily Anglophone, to test Sombart's theory that a capitalistic form of double-entry bookkeeping was instrumental in the development of capitalism. A significant original contribution of the paper is its reliance upon bookkeeping texts accessed from the Netherlands National Archive, The Hague, in the original Dutch and German from the late sixteenth and early seventeenth centuries, the more significant of which have not attracted the attention from accounting historians that their importance warrants.

Sombart's (1979, p. 258) thesis in part relied upon bookkeeping texts of the late sixteenth century, including Claes Pietersz's *Boeckhouwen op die Italiaensche manière* (1576) and *Practique om the leeren Rekenen cijpheren ende boeckhouwen* (1583), and Stevin's (1604) *Koopmans bouckhouding*, the most advanced bookkeeping texts of their time. These presented a complete system of capitalistic double-entry bookkeeping which required that the contents of the ledger were periodically closed to a profit and loss account that was, in turn, closed to a balance statement. Their popularity at the time demonstrates that Netherlands' bookkeepers were well aware of the method by the late sixteenth century (Ten Have, 1933, p. 1). However, the evidence from business practice to be presented here shows that, unexpectedly, a capitalistic form of double-entry bookkeeping was a curiosity in the north Netherlands, notably Amsterdam, that was not applied in practice by the most advanced forms of business at the time (Nussbaum, 1937, p. 163).

Rather than finding evidence of Sombart's twentieth century conception of double-entry bookkeeping being used widely in The Netherlands, this study establishes that accounting instead followed the practices of northern German Hanseatic businesses and German accounting textbook writers which did not follow the method of Pacioli and Italian business. Instead, they ignored the elements central to

capitalistic double-entry bookkeeping. Thus, the primary influence on the accounting practices of the most sophisticated capitalist organisations in the late sixteenth century was not a form of Paciolian double-entry bookkeeping, as required by Sombart. The widespread Netherlands' reliance on German factor accounting used by Hanseatic merchants provides possibly the most convincing evidence to date that Sombart's conception of double-entry bookkeeping was not essential to either the appearance or management of joint stock companies like the English East-India Company (EEIC) and the Dutch East-India Company (VOC), generally considered the archetypal early capitalistic business form although not the essential form for capitalist motives to dominate business (Sombart, 1967, pp. 128, 144; Nussbaum, 1937, p. 168)[4]. In the introduction to his *Nieuwe Instructie,* Ympyn observed that double-entry bookkeeping was still largely unknown in southern Netherlands in the mid sixteenth century. Even as late as 1576, Claes Pietersz (Petri) confirmed that the method was not widely used in Amsterdam (Kojima, 1995, p. 246).

A capitalistic business entity, the origins of which can be discerned in the Italian business partnerships of the fifteenth and sixteenth centuries (De Roover, 1942, p. 36; Klein, 1981, p. 22, Cohen, 1980, p. 1345), is distinguished from earlier types by a legal form that made it quite independent of those who financed it and controlled its operations. Refined in North-Western Europe, the Italian model of the firm was subsequently developed in both The Netherlands and England to emerge as the seventeenth century joint-stock trading company (Nussbaum, 1937, p. 162; Gras, 1947, pp. 95-6; Winjum, 1972, pp. 214, 236-7). The financial administration of these companies, particularly the need to account to shareholders, afforded double-entry bookkeeping its principal significance after the sixteenth century (Gras, 1947, pp. 103-4; Carruthers and Espeland, 1991, p. 46; Yamey, 1994, p. 380; Lamarchand, 1994, p. 122). In adapting to meet the needs of shareholders, financial accounting shifted from a "feudal" to a "capitalistic" mode of accounting (Bryer, 2000a, p. 139). Feudal accounting might incorporate some of the features of modern double-entry bookkeeping, especially its dual form, but was incomplete in that it typically was not organised as a cohesive system which employed a capital account. It also lacked a regular determination of net profit or loss calculated from the details included in the bookkeeping records. By contrast, capitalistic or scientific double-entry bookkeeping[5] depended on, indeed was defined by, the inclusion of these two features in the bookkeeping system (Yamey, 1949, p. 99).

The transformation of Europe's economy from traditional feudalism to modern capitalism, together with accounting's role in that transition, has exercised the minds of scholars since Marx published the first volume of *Capital: a critique of political economy* in 1867. The contiguous genesis of capital accounting and the public corporation in the seventeenth century encouraged early twentieth century historians to suggest that the expansion of Europe's commerce between the fifteenth and eighteenth centuries was a direct result of the application of scientific double-entry bookkeeping and the development of the public company. More particularly, Werner Sombart proposed that the joint stock company's funding by share capital was made possible by the prior existence of scientific or capitalistic double-entry bookkeeping as a means to rationally calculate the return on investment (Sombart, 1953, p. 38; Nussbaum, 1941, p. 528; Weber, 1956, pp. 17-24; Winjum, 1972, pp. 6-18; Ten Have, 1976, pp. 7-10; Lane, 1977, pp. 177-8; Most, 1979, p. 248; Miller and Napier, 1993,

pp. 635-6; Bryer, 2000a, pp. 132, 140-1; Bryer, 2000b, pp. 345, 369; Napier, 2006, p. 456). Sombart and Weber both acknowledged that accounting was a significant influence on capitalism's progression but held quite different views on the nature of accounting's role. Whereas Sombart declared scientific bookkeeping to be an essential prerequisite for capitalism and the emergence of the public corporation, Weber (1956) perceived scientific bookkeeping as merely an important aid in capitalism's development.

The Sombart-Weber proposition of a relationship between scientific bookkeeping and the capitalistic firm has engendered a vigorous debate amongst accounting historians (Chiapello, 2007, pp. 264-76). While mostly refuting the notion that the emergence of scientific bookkeeping was directly responsible for the development of the public corporation, accounting historians concede a complex interrelationship between corporation and accounting, the nature of which is yet to be determined (Yamey, 1949, pp. 99-100, 113; Winjum, 1972, p. 231; Carnegie and Napier, 1996, pp. 7-8, 15, 29-31; Oldroyd, 1999, pp. 85-6; Hopwood, 2000, p. 763). In debating the significance of double entry bookkeeping for the rise of the modern capitalist corporation, accounting historians have relied primarily on English empirical evidence, largely ignoring the Dutch (Yamey, 1959, pp. 534-46; Winjum, 1971, pp. 333-50; Bryer, 2000b, pp. 339-69). To address this gap in accounting history this paper examines the extent to which Hanseatic, rather than Italian, bookkeeping practices influenced Netherlands' accounting in the sixteenth century and, therefore, the opening years of the seventeenth century.

The following section revisits the debate elicited by Sombart's thesis that the development of modern capitalism depended on double-entry bookkeeping. It establishes the meanings accorded to capitalism and double entry bookkeeping that Sombart and others relied upon and identifies those aspects of their interpretation that were present in The Netherlands at the end of the sixteenth century and, thus, the very beginning of the seventeenth century when the VOC was established[6]. The Netherlands, especially its northern province of Holland and the capital city Amsterdam, were the centre of nascent capitalism in the late sixteenth and early seventeenth centuries, which has been claimed to have been made possible by the application of Italian double-entry bookkeeping introduced into The Netherlands by Ympyn in 1543 (Sée, 2004, pp. 11, 119, 126; De Roover, 1974, p. 179; Winjum, 1972, pp. 6-8, 23). Contrary to this interpretation, Hanseatic business practices are shown to have been the dominant influence on bookkeeping in sixteenth century Holland. In the subsequent sections of the paper this German influence is reinforced with a study of German accounting texts available to Dutch merchants, both directly and through their influence on Dutch accounting textbook writers. The paper concludes with a brief excursion into the opening of the seventeenth century with an examination of Simon Stevin's text which is considered to be the most reliable rendition of Dutch accounting practices extant in the late sixteenth century.

Double-entry bookkeeping and the rise of capitalism: Sombart's thesis and its critics

Werner Sombart (1863-1941) was principally responsible for the hypothesis that capitalistic double-entry bookkeeping (systematic or scientific bookkeeping) united the broader spirit of capitalism and the individual capitalist, thereby enabling capitalism to flourish in Europe.

> The characteristic pattern of business organization resulting from systematic bookkeeping has been of critical importance for the development of capitalism in its most essential aspect. One cannot imagine what capitalism would be without double-entry bookkeeping: the two phenomena are connected as intimately as form and content (Sombart, 1953, p. 38)[7].

While Sombart's hypothesis has created much interest and, at times, has enjoyed wide support (Winjum, 1972, p. 23), it does not attract universal acceptance. Most especially, a fundamental problem in determining precisely what Sombart intended by "capitalism" and "double-entry bookkeeping" saw his hypothesis severely criticised (Stehr and Grundmann, 2001, p. 3; Chiapello, 2007, pp. 264-76). Although Sombart did not define exactly what he intended by systematic bookkeeping he clearly meant a modern, twentieth century conception of double-entry bookkeeping method that incorporates a profit and loss account, capital account, and balance account, that is "scientific" double-entry bookkeeping (Yamey, 1940, p. 337). However, unlike Sombart for whom profit maximisation was central to the arguments concerning double-entry bookkeeping's role in the development of capital, the "Italian method" of Pacioli (1494, chapters 1, 27, 34) considered the primary purpose of bookkeeping to be the compilation of a credible set of records that could be used as a defence against claims made by other parties. A critical aspect of this general aim was to make a "satisfactory" profit in accordance with Church law (Aho, 1985, 2005, p. 28; Fischer, 2000, p. 305). Profits were governed by the ethical requirement that they were fair, a feature of Paciolian double-entry bookkeeping that runs counter to Sombart and Weber's hypotheses (Sée, 2004, pp. 32-3).

The phrase "Italian method" indicated a form of bookkeeping that maintained at least two principal books of account; a journal and ledger, and in which dual entries, that is, opposing debits and credits of equal value, were posted to the ledger. As a result, the ledger, if correctly posted, would be in a state of constant equilibrium. Reference to the "Italian method" did not signify a capitalistic form of double-entry bookkeeping, the use of a capital account, or a complete record that was limited to business transactions. Consequently, it is not double-entry in the sense that Sombart or Bryer (2000a, b) would recognise but equated to the first stage of Winjum's (1971, p. 335) continuum for double-entry bookkeeping. This comprised a bookkeeping system without nominal and capital accounts but which acknowledged the principle of dual ledger postings and was, therefore, in constant equilibrium. Furthermore, according to Kats (1930, pp. 311-12) continental Europeans interpreted the phrase "double-entry" as simply meaning a bookkeeping system that employed both journal and ledger, that is, a double book system. Reference to this term was common in the sixteenth century. It is found in the title of the second of Tagliente's (1525) bookkeeping texts, *Libro doppio*. Similarly, Manzoni's (1540) publication is entitled *Quaderno doppio* (double record books). Likewise, Schweicker's (1549) text, thought to have been based on Manzoni's work, is entitled *Zwifach Buchhalten* (Double-bookkeeping). Furthermore, Ympyn made a direct reference to the relationship between Italian bookkeeping and bookkeeping by double books in the title of his 1543 text, *Nieuwe Instructie*. Ympyn stated (in Geijsbeek, 1974, p. 112) that to keep accounts in the Italian manner was to keep certain and accurate accounts with double books according to the manner described ("ende Rekeninghe te houdene nae die Italiansche maniere [. . .] hoe hy zekere ende perfecte Rekeninghe houden sal met dobbleboecken nae die manieren voors."). It can therefore be concluded that early references to double-entry bookkeeping or the

Italian method did not mean a "scientific", capitalistic form of double-entry bookkeeping but simply the use of double accounting books, that is, journal and ledger and an equilibrium of the value of debits and credits recorded in the latter.

Scientific double-entry bookkeeping represents the owners of a business organisation by a capital account that allows the business's assets to be converted into abstract values. In this way, it renders the concept of capital objective, and clarifies the acquisitive aims of capitalistic business operations. By creating the concept of capital, scientific double-entry bookkeeping "simultaneously created the concept of the capitalistic enterprise as that economic organization, that institution, whose object is the evaluation of a particular capital" (Sombart, 1979, p. 253). Thus, scientific double-entry bookkeeping's sole objective is promoting the continuous increase of an initial investment. It achieves this outcome by providing capitalists with a regular, periodic profit and loss statement and capital account that can be used to make rational investment decisions. Importantly, scientific double-entry bookkeeping also permitted the business to be perceived as an independent entity, quite distinct from its owners, which promoted the development of the large joint-stock company, the harbinger of the modern capitalistic economy (Sombart, 1967, p. 145; Robertson, 1959, p. 55; Nussbaum, 1937, pp. 162-3; Brulez, 1959, p. 432; Most, 1972, pp. 727-8; Winjum, 1972, pp. 213-14; Ten Have, 1976, p. 68)[8].

Although double-entry bookkeeping was important to Weber's model of capitalism's development, unlike Sombart he did not see it as the initiator of modern capitalism but as a facilitator of capitalism. Indeed, Weber denied that any particular form of accounting was necessary, stating that the requirement for rationality is satisfied if:

> [. . .] a calculation of capital in terms of money is made, whether by modern bookkeeping methods or in any other way, however primitive and crude. Everything is done in terms of balances: at the beginning of the enterprise an initial balance, before every individual decision a calculation to ascertain its probable profitableness, and at the end a final balance to ascertain how much profit has been made (Weber, 1956, p. 18).

Many historians have rejected Sombart's proposal in its entirety or afforded double-entry bookkeeping no more than a minor or a utilitarian (reactive) role in the development of capitalism (De Roover, 1938. p. 144; Carosso, 1952, p. 28; Yamey, 1964, p. 136; Most, 1972, pp. 730-1; Winjum, 1972, pp. 242-4; Cerboni, in Martinelli, 1974, p. xii; Yamey, 1978, p. 110; Yamey, 2005, p. 77; Braudel, 1992a, b, c, Vol. 2, p. 575; Funnell, 2001, pp. 58-60; Napier, 2006, p. 454; Arnold and McCartney, 2008). Furthermore, Chiapello (2007, p. 264) observed that Sombart's claims concerning the relationship between capitalism and double-entry bookkeeping could not be sustained for the period prior to the mid eighteenth century. Similarly, Yamey's (1949, pp. 99-113) studies of predominantly English accounting texts published between the fifteenth and mid-nineteenth centuries and extant English merchants' accounting records compiled between the sixteenth and nineteenth centuries (Yamey, 1964, pp. 117-36) failed to find any support for Sombart's thesis concerning the relationship between double-entry bookkeeping and the development of capitalism. In particular, Yamey (1949, pp. 104-10) concluded that the bookkeeping texts he studied provided no evidence that a capital account, profit and loss, and balance sheet made a significant contribution to capitalism's development. On the contrary, he concluded that double-entry bookkeeping records were more valued for the order they instilled on the death of

the merchant, the termination of a business association, or where a dispute had arisen between debtor and creditor than as a means of rational decision-making. The typical medieval businessmen did not rely on double-entry bookkeeping to provide a detailed knowledge of their business. Where double-entry bookkeeping was used at that time its principal benefit was as an effective means of controlling partners, agents or managers (Yamey, 1949, p. 111; Winjum, 1972, pp. 231, 244). Winjum (1971, pp. 334-5) also recognised that the type of accounting system envisaged by Sombart was simply not apparent in English business archives before the late seventeenth and eighteenth centuries[9]. Rather than scientific double-entry bookkeeping, Winjum identified what is generally classified as venture accounting.

Ventures are temporary business associations that are wound up upon completion of the specific purpose for which they were created. Characteristic features of venture accounting are the absence of a single capital account for the business as a whole and separate accounts are not kept for capital assets, which are typically treated like any other business expense. Furthermore, the profit or loss realised on the venture is only determined when the association is wound up. Consequently, the periodic profit and loss calculation required by scientific bookkeeping is not a feature of venture accounting. Factor's bookkeeping was another prominent example of the type of bookkeeping commonly employed throughout sixteenth century Europe, including The Netherlands. Factor's bookkeeping owes nothing to Pacioli. Its roots probably lie in a much older form of Italian bookkeeping that goes back to Roman times and is apparent in Cardano's (1539) *De ratione librorum* tractandorum published in Milan (Kats, 1929b, pp. 281-283; Kats, 1930, p. 316). Like venture accounting, factor's accounting serves a temporary business association. It arises from the need to account for a specific consignment of trade goods entrusted to an agent or factor. As no investment has been made in the factor's business, factor's bookkeeping also does not require a capital account. Nor, for the same reasons, does the factor usually compile a profit and loss statement. Not only were these features of factor accounting characteristic of Hanseatic merchants, it is also clear from the evidence of both sixteenth century northern Dutch accounting practices and accounting texts that the Dutch relied on the bookkeeping practices developed by the German Hanseatic League which dominated commercial practice in north-western Europe up to the late sixteenth century. Holland's towns located around the Zuider Zee, such as Hoorn and Amsterdam[10], which were not members of the Hanseatic League, nevertheless utilised similar business methods and bookkeeping practices (Zimmern, 1891, p. 163; Posthumus, 1953, pp. 4, 33; De Roover, 1974, p. 174; Blockmans, 1993, p. 48). Consequently, sixteenth century Hanseatic business practices are key to understanding Netherlands' business and related accounting practices.

The Hanseatic influence in sixteenth century Netherlands

Netherlanders[11] and Germans, especially those from Lower Germany[12] enjoyed close social and economic relations between the fifteenth and sixteenth centuries (Zimmern, 1891, p. 163; Posthumus, 1953, pp. 4, 33; De Groote, 1961, p. 147; De Roover, 1963, pp. 111, 114; De Roover, 1974, p. 174; Geyl, 1980, pp. 25-6; Blockmans, 1993, p. 48). Lower German, the language of north Germany and the Hanse, was similar to Flemish (De Roover, 1963, p. 92) and was the *lingua franca* in The Netherlands, while northern Germany had long been The Netherlands' most important trading partner (De Roover,

1963, p. 114; De Groote, 1961, p. 147). Simon Stevin, a Netherlander, alluded to this when he explained that his book *Vorstelicke Bouckhouding op de Italiaensche wyse* (1607) would use common Lower German words, such as debet, credit, debiteur, crediteur, balance, and journal, rather than their Upper German counterparts (Stevin, 1979, p. 3). Moreover, the Netherlands was an integral part of the Hanseatic commercial environment. Given northern Germany was The Netherlands' most important market, it should not be surprising that the latter's business practices would have been moulded by the Hanseatics. It follows, therefore, that an understanding of German, particularly north German, business practices is essential to an understanding of The Netherlands' subsequent economic expansion, its business associations, and accounting practices in the nascent modern capitalism of the sixteenth century (Zimmern, 1891, p. 163; Posthumus, 1953, p. 4).

The descriptions Hanse or Hanseatic did not originally specifically refer to merchants but simply meant an association of towns, although it was commonly used to indicate a fraternal band of itinerant north German merchants or their communal capital. The origins can be traced to 1241 when the cities of Hamburg and Lubeck formed an agreement to protect their merchants against Baltic pirates. By the fourteenth century this association of towns, which resident merchants could elect to join, had expanded and came to be collectively known as the Hanseatic League. From the fourteenth century the Hanseatic merchants increasingly conducted their business through agents located in distant towns, continuing to operate as sole traders using small, short-lived partnerships that had relatively little apparent capital (De Roover, 1963, p. 106; Kohn, 2003, p. 10; Dollinger, 1970, pp. xvii, 98, 99; Lloyd, 1991, pp. 1-2). Rather than a hierarchical structure, Hanseatic business was organised as a chain of cooperative business associations and agencies linked in an informal manner. The most common form was the mutual agency or *gegenseitige Ferngesellschaft*, the key elements of which were: *vrunde*, that is, trusted correspondents with whom commercial intelligence was exchanged; *knechte* or *dieners* (servants or employees); and *selschop*, who were business associates or agents (De Roover, 1956, p. 165; De Roover, 1963, pp. 105-6; Ewert and Selzer, 2001, p. 10; Posthumus, 1953, p. 35)[13].

The *gegenseitige Ferngesellschaft* was an informal arrangement in which the parties, who were located in different towns, agreed to act as each other's agents and trade reciprocal consignments for their common benefit. The parties concerned approached the market as individuals, rather than the representative of their associates, and accounted for their actions by an irregular reckoning to settle the current account each kept in respect of the other associates (Mickwitz, 1938, p. 195; Posthumus, 1953, p. 28). At any one time a merchant could be involved in a multitude of businesses that were linked in an indirect and ill-defined way. In essence, it consisted of a multitude of small, short-term ventures that produced a fragmented form of accounting. Mutual confidence and trust were the crucial requirements for this to work across large distances and in circumstances of great uncertainty. Desirable conduct was enforced on the pain of a miscreant being ostracised by the League, which was a very severe punishment that effectively excluded the transgressor from the means of earning their livelihood (Ewert and Selzer, 2001, p. 15).

The Baltic region's relative geographic isolation has been suggested as a root cause of the perceived primitive nature of Hanseatic's business organisation and financial administration (Eucken, 1951, in Winjum, 1972, p. 7; De Roover, 1974, pp. 170-1).

However, this argument is easily countered by the scope of Hanseatic firms' operations which spanned the entire breadth of northern Europe and undoubtedly brought them into constant contact with Italian influences in Flanders, the centre of western European commerce in the sixteenth century (de Roover, in Carman, 1935, pp. 115, 121; Mickwitz, 1938, pp. 188-9, 2056; De Roover, 1948, p. 210-14; Ten Have, 1976, p. 9). A more compelling argument for the Hanseatic form of business is offered by the nature of northern European geography that determined the Hanseatic's primary trade route. In contrast to the array of routes followed by Mediterranean trade, Hanseatic commerce had the advantage that its trade followed a single axis running 1,600 kilometres north-east to south-west through the Baltic and North Sea (De Roover, 1963, p. 106; Cordes, 1998, p. 6). Geography and harsh climatic conditions limited the time when sea voyages could be undertaken and the distance that could be travelled in a season. Consequently, the typical Hanseatic firm was limited to a sole trader or small partnership that dealt in small quantities of goods.

Unlike their Italian counterparts, the Hanseatic merchant could concurrently be both wholesaler and retailer, and every Hanseatic businessman could simultaneously be both principal and agent in relation to other parties with whom they had a business association. Every consignment exchanged between partners initiated a unique business association that had to be accounted for quite independently. Such firms could endure for many years but were never conceived of as permanent associations in the mould of the public company. Moreover, their business practices resulted in the Hanseatic firm not having a common capital or mode of organisation. In such a loose association, no partner could exercise formal control over the actions of other partners, and a partner's claim over profits or their obligation to meet losses was limited to the particular part of the business in which they had a specific interest (Stieda, in Mickwitz, 1938, p. 189; Posthumus, 1953, pp. 9-10; De Roover, 1974, pp. 171, 175). A feature of these associations was that instead of paying the proceeds of a sale to the owner of the goods, which would have required the transfer of cash or reliance on bills of exchange, the Hanseatics squared their obligation by remitting trade goods to the party to whom a commercial obligation was owed. Between their sporadic accountings, Hanseatic merchants depended on regular correspondence (*Schriftlichkeit*) as the principal means by which they kept themselves informed about the state of their business (De Roover, 1963, p. 108; Stieda, in Mickwitz, 1938, p. 189; Posthumus, 1953, pp. 9-10; De Roover, 1974, pp. 171, 175).

The informal nature of their association meant that Hanseatic businesses were very flexible. Small parcels of a diversified range of goods could be transacted relatively speedily, at minimal risk to the individual trader, thereby reducing individual risk and inducing commercial efficiencies. Furthermore, the modest size of individual businesses and the reciprocal nature of the commerce also meant that these firms could economise on the amount of capital required. Accordingly, rather than the Hanseatic mode of business being primitive, it was particularly well adapted to the conditions under which Hanseatic commerce was conducted. Still, this simple form of business organisation and method of conducting business has led some historians to judge the Hanseatic merchants' bookkeeping to be quite inferior compared to that of Italy and southern Netherlands (see for example De Roover, 1974, pp. 170-1). However, in Hanseatic business conditions an idealistic capitalistic form of double-entry bookkeeping was neither possible nor desirable for Hanseatic merchants (Ten Have,

1976, p. 9). Pacioli's bookkeeping had little attraction for the Hanseatic businessman until at least the mid-seventeenth century.

In stark contrast to what Sombart had assumed would be the situation when scientific double entry bookkeeping was not used, the accounts used by Hanseatic merchants do not indicate the characteristics of an unsophisticated "pedlars" economy but, rather, of rational, well-organised, sophisticated and enduring long-distance wholesale traders who used accounting for a different purpose than that for which Italian double-entry bookkeeping is best suited. The north German Hanse were not alone in their rejection of Paciolian bookkeeping. Notwithstanding that the senior management of the south German[14] firm of Fuggers were formally schooled in Venice, and well aware of Venetian double-entry bookkeeping, it elected not to keep its account by Italian double-entry, preferring instead the customary German method based on journal, personal ledger and goods ledger (Ten Have, 1976, p. 9; Hartsough, 1932, pp. 543-51; Kellenbenz, 1979).

The informal, fluid association especially apparent in the *gegenseitige Ferngesellschaft* meant that an owner's perception of the business's accounts and the concomitant primacy of the concept of capital demanded by double-entry bookkeeping (Pacioli, 1974, chapter 12) was simply not possible. Hanseatic accounting developed from two needs: the primary motivation was to enable a settlement between partners and a secondary objective was to keep a record of outstanding claims with third parties. As a result, their accounting was limited to a record of debts and dues, and goods on hand that they were accountable for or that had been consigned to another party. The sixteenth century bookkeeping textbook writer Valentin Mennher, in common with others of the time, balanced the accounts back to cash on hand (Kats, 1929b, pp. 284-6; Kishi, 1984, p. 354), a characteristic found in the VOC's first public audit completed in 1623 (NL-HaNA. VOC, 1.04.02., 7169, n.d.). As noted above, this is essentially what is known as factor's bookkeeping. Most important under these circumstances was an orderly record that precisely described the goods concerned, allowed goods to be identified as the property of a particular person, noted who they had been received from, and recorded the manner in which they had been disposed. This emphasis on physical accountability meant that inventories were usually expressed as a quantified, common measure (tons, pounds, ounces, yards, barrels).

The Hanseatics did not value the commonly ascribed benefits of double-entry bookkeeping such as the ability to accurately calculate profit or loss so as to determine changes in net wealth (Ten Have, 1976, pp. 6-8) or its ability to promote an orderly financial administration (Winjum, 1972, p. 89). The notion of the business's profit did not reconcile with the Hanseatic reliance on reciprocal trade. Financial accounting in this environment comprised a series of quite independent current accounts expressed in monetary terms, which reflected the extent of indebtedness for a distinct parcel of goods. This meant that the typical Hanseatic merchant would have to simultaneously administer current accounts for a number of ventures and complicated exchanges that were all in different stages of completion. The whole record was only compiled on the liquidation or termination of a partnership, or the disposition of a specific parcel of goods. The purpose of Hanseatic bookkeeping, therefore, was not to provide a comprehensive view of the firm's financial state but to facilitate the preparation of the data required for the periodic settlement of the associates' current accounts (De Roover, 1974, p. 171; Mickwitz, 1938, p. 195). Accordingly, the benefits deemed to accrue from

the application of double-entry bookkeeping were generally redundant. Italian double-entry bookkeeping is more attuned to the needs of complex hierarchical organisations that have to supplement direct personal control by mechanised means, and that allow interested parties maximum insight into the state of affairs and results of the business (Ewert and Selzer, 2001, p. 12).

Capital determination, the essence of "scientific" double-entry bookkeeping, was rendered more problematical by the Hanseatic custom of classifying assets as either "active" or "passive". The latter were entirely omitted from the firm's accounts. Active capital, or *coopscat*, comprised those assets intended for exchange and cash. Passive capital, known as *coopmanscip*, was that part of a merchant's wealth not intended for trade or not yet committed for exchange. It included assets like warehouses and ships, which were usually not part of a formal financial reckoning. Accordingly, the concept of capital that endows the modern enterprise with a semblance of permanence was entirely foreign to the Hanseatic accounting concept (Posthumus, 1953, pp. 73-4; Riemersma, 1967, p. 57). The fact that the Hanseatics' bookkeeping methodology prevailed until well into the seventeenth century against supposedly more sophisticated southern methods demonstrates that it was well-suited to the times and should not readily be dismissed as "primitive" (De Roover, 1956, p. 160; De Roover, 1963, pp. 43-4; Elzinga, in Ten Have, 1976, pp. 2, 4; Ewert and Selzer, 2001, pp. 5, 16). For the same reasons that gave rise to the Hanseatic form of business organisation and administration, a pure partnership or other hierarcical form of business association was not ideal for prominent sixteenth century Amsterdam merchants nor the bookkeeping approach that these might require (Posthumus, 1953, p. 33).

Netherlands sixteenth century business accounting

Like Germany, northern and southern Netherlands demonstrated a marked difference in business practices. Up to the sixteenth and early seventeenth centuries, practices in southern Netherlands were generally believed to have been more advanced than those employed by the north, with the south being aligned with the best south German practices. In addition, knowledge and practice of Italian business methods were specific to particular regions, primarily the cities of Bruges and Antwerp. Even in Zeeland, just to the north-west, Italian influence was far less pronounced. Further north, in Holland and around the Ijssel (Zuider) Sea, Italian business methods were largely unknown (De Roover, 1974, p. 170 and De Vries and van der Woude, 1997, p. 132). Here the Hanseatic method of organisation and accounting prevailed into the late sixteenth century. The Dutch incorporated the basic elements of Italian bookkeeping onto this Hanseatic foundation, such as maintaining the ledger's equilibrium by posting each transaction to the ledger as both a debit and opposing credit, and the Venetian method of placing the debit and credit sides of an account on opposite pages of an open ledger folio. Notwithstanding this acknowledgement of Italian bookkeeping, the mechanics of Dutch bookkeeping of the time did not include a capital or profit and loss accounts. With German bookkeeping methods having a significant influence on Netherlands accounting practices (see below), the northern Netherlands, principally Amsterdam, developed quite different methods of accounting to that of southern Netherlands' cities such as Antwerp and later Zeeland's Middelburg, which had long been Antwerp's subsidiary port.

The account books of two Amsterdam merchants, Symon Reyersz. and Reyer Diricsz., who operated between 1485 and 1490, are typical of the Hanseatic model (De Roover, 1974, p. 174; Posthumus, 1953, pp. 1-16). The contrast between north and south Netherlands is vividly illustrated if the format of the Bruges ledger of Collard de Marke is compared to that of Reyersz. and Dircsz. which was compiled in the late fifteenth century, more than a century after de Marke's records. Notwithstanding that the Bruges records are more than a century older than those of Reyersz. and Dircsz., they have a distinctly modern appearance. In comparison, the Amsterdam records are still in narrative form, and display none of the structural advances apparent in de Marke's accounting, which was kept *ad modum banchi*[15]. Although not kept strictly according to the principles of Paciolian double-entry, De Roover (1948, p. 21) believed that de Marke's form of bookkeeping was widely used by Italian firms operating in the southern Netherlands after 1400. By contrast, indigenous Flemings appear not to have adopted a similar method before the mid sixteenth century. Mickwitz disagreed (1938, p. 205) with De Roover's (1937, p. 280) contention that three Bruges account books, dated between 1498 and 1503, were kept by double-entry bookkeeping. Instead he considered that these records indicated a transitional form of bookkeeping at best. In Mickwitz' opinion, the earliest Flemish accounting kept according to the principles of double-entry bookkeeping were the 1561-1565 accounts of Antwerp merchant Geerard Gramaye (Mickwitz, 1938, p. 206).

A particularly interesting example of late sixteenth century Netherlands accounting in the Hanseatic tradition is provided by the firm of Cunertorf, Snel and Jansz. The partners came from the Overijssel cities of Kampen and Deventer in north-eastern Netherlands and engaged in trade between the Baltic, The Netherlands, and Portugal (Uitterdijk, 1904, pp. ix, xxi, xxxii). Cunertorf and Snel were based in Lisbon where, amongst other things, they dealt in high value goods such as ivory, pepper, and spices. Jansz., the firm's northern agent, roved throughout The Netherlands and Baltic region. Cunertorf and Jansz' accounts for the period 1578 to 1588 (Uitterdijk, 1904, pp. 439-524) are typical of the Hanseatic business process. The firm did not maintain a centralised accounting system but, instead, each partner kept a current account in the name of the other partner that was irregularly reconciled, with extensive correspondence serving as the source for the accounting entries (Uitterdijk, 1904, pp. 1-438). Both correspondence and accounts were compiled in Dutch. From extant accounts it is clear that the accounting procedure followed by each partner of Cunertorf, Snel and Jansz. was reasonably consistent. The accounts, as reproduced in Uitterdijk (1904), have the appearance of a ledger, with folio numbers, but must have been prepared on loose leafs. Debit entries are recorded on the left and credits on the right. When a partner despatched goods to another, the recipient debited his current account with the other partner with the cost price of the goods received and any incidental expenses incurred. This was followed by a record of the value of the sales. Sales, less the net cost price of the costs sold, yielded the net profit. In addition, the partner recorded all outstanding bills receivable and the cost price of trade goods sent to the other partner and the costs incurred in doing so. The reverse procedure was followed by the other partners.

An interesting feature of the accounts of Cunertorf, Snel and Jansz. is the phraseology, which was essentially the same as that used in Pietersz's text, *Boeckhouwen op d'Italiaenshe maniere* and other Netherlands texts of the time. It also

accords with the phraseology employed by the VOC some years later. The bookkeeping practice of Cunertorf, Snel, and Jansz. was quite similar to that followed by the Antwerp firm of della Faille which conducted business with Venice at the end of the sixteenth century (Brulez, 1959, pp. 432-44). The della Faille's bookkeeping incorporated a mix of private and business matters, based on agents' accounting that incorporated voyage accounts to record the personal accountability of the agent (Brulez, 1959, pp. 437-9). As a result, the firm's bookkeeping was still quite decentralised with irregular balances compiled from open ledger accounts (Brulez, 1959, pp. 434, 440). The mid sixteenth century bookkeeping records of two other Antwerp (south Netherlands) firms, the de Papes (1536-1564) and Daniel de Bruyn (1561-1569), display the same strong Hanseatic characteristics (Mickwitz, 1938, pp. 205-6).

The empirical evidence presented above runs glaringly counter to the generally accepted view that early seventeenth century Netherlands' bookkeeping practices developed from the Paciolian model introduced into the Netherlands by Ympyn in 1543. Moreover, it refutes the notion that double-entry bookkeeping was an indispensable element in the development of Dutch sixteenth century wholesaling and instrumental in Amsterdam's emergence as the financial centre of Europe (see Ten Have, 1933, p. 21 and Winjum, 1972, p. 8). Indeed, the examples provided are not atypical for the time. Except for a few firms that had strong associations with Italy, northern Netherlands' accounting was predominantly Hanseatic in nature, with sixteenth century Netherlands' financial accounting conspicuous by the absence of a profit and loss account (Van Houte, 1977, pp. 191, 206-7). However, as The Netherlands' economy developed during the late sixteenth century, it became increasingly necessary to adapt the individual perspective of factor's[16] bookkeeping to accommodate more permanent associations of capital and multiple shareholders. To this end, elements of double-entry bookkeeping were progressively grafted on to the Hanseatic tradition. The clear, unmistakable and enduring influence of Hanseatic practices on Netherlands bookkeeping was both endorsed and promoted by numerous German and Dutch bookkeeping texts.

Dutch bookkeeping texts and the German influence

Early sixteenth century texts

German texts describing the Paciolian method of bookkeeping include Wolfgang Schweicker's *Zwifach Buchhalten* (1549), a direct translation of Manzoni's (1543) *Quaderno doppio* (De Waal, 1927, p. 83); a manuscript, *Ein huepsch Püech* … (1552), attributed to Johann Neudörfer; Sebastiaan Gamersfelder's *Buchhalten Durch zwey Bücher nach Italianischer Art und weise (*1570) and Wolfgang Sartorius' *Buchhalten mit zwey Büchern, nach Preuszischer Müntze*, (1592). However, there is no evidence that these texts made a significant contribution to an understanding of The Netherlands' bookkeeping thought and practice. Nor, indeed, is there any evidence to support the contention that Ympyn's *Nieuwe Instructie* (1543), which was based on contemporary Italian texts, exercised a significant influence on sixteenth century Dutch bookkeeping texts or practice. Instead, texts that describe north German bookkeeping had a greater influence on the thinking and practice of accounting in sixteenth century Netherlands, especially in Holland (Posthumus, 1953, p. 33; De Roover, 1974, p. 174; Blockmans, 1993, p. 48). Sixteenth century northern Netherlands' bookkeeping, especially that of

Holland, was directly influenced by the business practices of the Baltic Hanseatic League (Posthumus, 1953, p. 33; De Roover, 1974, p. 174; Blockmans, 1993, p. 48).

Heinrich (Grammateus) Schreiber published the earliest known German bookkeeping text based on north German business methods[17]. As it has no apparent title, this text is commonly referred to by the first line of the overall introduction: *Ayn new kunstlich Buech,* or by the introduction to the bookkeeping section: *Büchhalte durch Zornal Kaps und Schuldtbüch aud alle kauffmanschafft*. The text was also undated and, although the preface is dated 1518, the examples bear the date 1521, which suggests a publication date, about 1525. Later editions published in 1531, 1538, 1544, and 1572 testify that Schreiber's manual must have been regarded as a sound and useful description of German bookkeeping at that time (Penndorf, 1966, p. 108). However, Schreiber's text was said by Kats (1929b, p. 282) not to have been based on Italian methods. Although he stipulated the three main account books prescribed by double-entry bookkeeping texts of the time: journal (*Zornal*), goods ledger (*Kaps*), and personal ledger (*Schuldtbuch*), his system was not a complete double-entry bookkeeping system. Some journal entries were posted as both a debit and credit in either of the two ledgers but transactions relating to goods on consignment or barter were only posted to the goods ledger, which was essentially an inventory that recorded both the quantity and monetary value of the merchandise on hand. At the end of the journal was a statement of profit or loss prepared from data in the goods ledger. The presence of a profit and loss statement suggests that this was not purely an agent's record that was intended to satisfy accountability for the physical goods. Further, Schreiber's personal ledger was divided into three. The first account, headed "*Hab Zalt*", on the debit, and "*Ich Soll*", on the credit, was the creditors account. The second, headed "*Hat Zalt*" on the debit and "*Soll Mir*" on the credit related to debtors. The third, appeared to be a cash account but, although headed "*Einnemen*" on the debit and "*Ausgeben*" on the credit, it is more appropriate to consider it the principal's capital account, as the German *geldvermögen* limited capital to cash, whether in hand or at bank, and debtors and creditors (Kats, 1929b, p. 286; Kats, 1930, pp. 312-13). All three were posted in the normal way and recorded monies due or owed. The system had no capital account, which, contrary to the evidence of the profit and loss, does indicate agent's accounting. However, as little distinction was made between capital and cash in earlier times, the cash account could have sufficed for both purposes. An inventory of the goods on hand, listing both the quantities and cost price of the goods on hand at the end of the year, was compiled at the end of the goods ledger.

Schreiber's text shared two similarities with Stevin's seventeenth century bookkeeping. The first is that both omitted any invocation to God. The second concerns his "*Probe des buchhaltens*" or proof of the bookkeeping, which was made at the end of the year when a balance of the open accounts was compiled. Schreiber explained that the accounts were confirmed by adding the balances of cash, debtors and the remaining goods. From that sum he subtracted the creditor's balance to yield the profit, which Schreiber (1544, Bv) independently calculated at the end of his journal examples. If the two agreed, the bookkeeping could be assumed to be correct. Schreiber's proof is very similar to the key Stevin (1979, p. 35) used to link his balance statement and the proof (*staet proef*) of the balance[18]. In Stevin's example the key is net profit for the year, determined by initial capital base less closing capital balances for the period[19]. Rephrased this states that net capital equals net profit for the period.

Stevin continued by explaining that the capital balance at a particular date comprised the sum of debtors, cash on hand, and inventory balances less the creditors balance[20]. Although Stevin's proof is generally held to have represented a significant advance in double entry bookkeeping, it clearly repeats the essence of what Schreiber had attempted to explain over three quarters of a century before (see also Bywater and Yamey, 1982, p. 90).

Some progress towards a sophisticated form of bookkeeping is evident in Johann Gottlieb's *Ein Teutsch verstendig Buchhalten fur Herren oder Gesellschafter inhalt Wellischen*[21] (1531) and *Buchhalten, Zwey Künstliche und verstendige Buchhalten* (1546). Notwithstanding that both Gottlieb's manuals are similar to Schreiber's text, Buchhalten undoubtedly described double-entry bookkeeping[22]. Gottlieb's (1546) journal demonstrates a modern structure that was later incorporated into Dutch accounting by substituting "is schuldich" for his "hab ich" to indicate the debit, a pair of vertical parallel lines to separate debit and credit and the term "von" to indicate the credit. The structure of Gottlieb's (1546) ledger is Venetian. It utilised a double page with debits on the left page and credits on the right. More importantly, he employed a single ledger, albeit still divided into Schuldbuch (personal ledger) and Guterbuch (goods ledger). The personal accounts included a cash account, a principal's capital account, and various debtors and creditors' accounts.

The goods book section of Gottlieb's ledger recorded the individual goods accounts. A profit and loss statement was prepared in the goods book and the result confirmed by comparing it to net assets at the end of the period. Similarly to Schreiber, Gottlieb recorded the value of inventory in monetary terms. This, together with the determination of profit, indicates that Gottlieb did not describe a consignment agent's bookkeeping but perhaps the bookkeeping of an employee. As with Schreiber, goods received are recorded on the right hand folio and goods leaving the system on the left. Each account is balanced with profits, calculated on cost price, recorded as a balance on the left hand page and losses on the right. At the end of the *Guterbuch* is a profit and loss statement that recorded the accumulated profits and losses, together with trade expenses not specific to a particular commodity. Consequently, the result is a net profit. The profit and loss statement is not intended as an internal part of the bookkeeping system. Open account *Schuldbuch* (debtors, creditors, and cash book) balances were closed and the balances transferred (not by journal entry) to a temporary account (folio 22) compiled. These, together with net profit, were then are recorded in a trial balance (folio 23) that listed assets on the left and the capital balance, net profit, and outstanding liabilities on the right. A second, more detailed external statement was prepared that recorded the financial position, comprised of equity plus liabilities on the left and assets on the right (folio 24). Finally, Gottlieb constructed a third balance, structured as equity equals net assets (folio 25). As a result of capital fluctuating during the period, the trial balance reflected the net capital balance at closing date. By contrast, the two statements of position recorded the original capital sum invested.

Gottlieb's text and other German bookkeeping texts published after 1550 indicate that elements of double-entry bookkeeping were gradually assimilated into the traditional German accounting process (Penndorf, 1966, p. 179). The texts published by Valentin Mennher von Kempten were the prime examples of this trend and, thus, assume great importance in understanding the manner and evolution of sixteenth and seventeenth century Dutch accounting.

Later sixteenth century texts

Mennher, who was born in Germany, emigrated to Antwerp in south Netherlands where his four bookkeeping texts were published. Two of these were in French (the language of Antwerp) and two in German. As a result, Mennher represented the formal transition of German bookkeeping into The Netherlands' environment. His main bookkeeping publications were *Practique brifve pour cyfer et tenir Livres de Compte* (1550) and *Buechhalten* (1560), which addressed traditional German factor's bookkeeping in the manner of Schreiber and Gottlieb with a separate goods ledger, were widely considered to be the best of their type because the author attempted to fuse the closing technique used in double-entry and factor's bookkeeping (for this appreciation see Kheil, 1898, in De Waal, 1927, pp. 123, 131; Kats, 1929b, pp. 279, 281). Notwithstanding the quality of Mennher's description, his early ledger had a quite antiquated appearance, and owed nothing to either Schreiber or Gottlieb. Rather than placing opposing sides of an account opposite each other, Mennher reserved the top half of the page for the debit side of the accounts on that page and the bottom half for the credit section of the accounts recorded on the page (Kishi, 1984, p. 351).

Mennher's other texts, *Buechhalten kurtz Begriffen durch zway Buecher* (1563) and *Practique pour brievement apprendre a Ciffrer, & tenir Livre de Comptes* (1565), treated owner's bookkeeping from a factor's perspective. While they successfully incorporated capital accounting principles onto traditional German bookkeeping, Mennher's texts remained quite distinct from Paciolian bookkeeping. The bookkeeping which was based on an equality of debits and credits, distinguished between private and business transactions, combined the two traditional German ledgers by recording both personal accounts, and goods' accounts in the *Schuldbuch*[23], and incorporated a capital account, profit and loss and balance accounts (for comments on these see De Waal, 1927, p. 134; Kats, 1929a, p. 209). Consequently, these texts are significant because they represented a crucial link between early sixteenth century German-based Dutch accounting and scientific double-entry bookkeeping (Kats, 1929b, pp. 279-82; Kojima, 1995, p. 154).

Like his predecessors, Mennher's texts were firmly grounded in the commercial reality of sixteenth century Hanseatic business (Penndorf, 1966, p. 138). Moreover, the number of prominent Dutch writers, including Piertersz., Mellema, Stevin, and Goessens (see below) who used elements of these texts, testify to their efficacy and their influence on Netherlands' bookkeeping practice and thought. Bartholomeus Cloot's *Corte Maniere ende stijl om Boeck te houden, op de Italiaenshe wyse ende maniere,* published in Antwerp in 1582 closely followed Mennher's earlier factor's bookkeeping. Martyn Wentseslaus's *Instrucsye op het Italians bouckhouden* published in Middelburg, Zeeland, in 1588, also treated factor's bookkeeping but, unlike Cloot, his description was intended for an employee keeping the books of his employer. Consequently, it incorporated a profit and loss account that was closed to capital (De Waal, 1927, p. 192). An indication of the continuing relevance of the customary Hanseatic business methods, especially in north Holland, is evident in Mellema's (1927) comment that Cloot's text was highly thought of in Amsterdam.

Claes Pietersz. (Petri) published the first major bookkeeping texts in north Holland. Moreover, as he came from Deventer, in northern Netherlands, and was a resident of Amsterdam, he was the first to represent a north Netherlands perspective of late sixteenth century bookkeeping. In this respect, Pietersz. substantiated the belief that

Paciolian double-entry bookkeeping was largely unknown in north Netherlands before the last quarter of the sixteenth century. Pietersz. published three bookkeeping texts: *Boeckhouwen op d'Italiaenshe maniere* (1567), *Boeckhouden op die Italiaensche maniere* (1576), and *Practicque om the leeren Rekenen cipheren en boeckhouden* (1583) which continued the transition to a more modern form of bookkeeping, already evident in Mennher (1979). Pietersz's earlier text, *Boeckhouwen op d'Italiaenshe maniere* (1567), closely resembled Mennher's later work. There is also still an obvious similarity in the titles of Pietersz's *Practicque omte leeren Rekenen* (1596) and Mennher's *Practicque pour brievement apprendre a Ciffrer, & tenir Livre de Comptes* (1565). That coincidence was continued in the details of the examples Pietersz. used, which suggests that his *Practicque* was an edited version of Mennher's manual. Nevertheless, it is believed that Pietersz. offered a superior exposition of bookkeeping (De Waal, 1927, pp. 159-61). Like Mennher, Pietersz. also employed a single ledger for both personal accounts and goods (Pietersz. 1635), which raises another similarity because both authors referred to the ledger by using the German *Schuldboek*, rather than the Dutch term *grootboek*. Pietersz' journals used the Dutch equivalent "*is schuldich*" for Mennher's German expression "must have" or "*sol*" (Penndorf, 1966, pp. 50, 76, 135, 178). He also separated the debit and credit sections of the journal entry by the date, and followed the narration's credit reference by the amount, as did Mennher's later texts. The phrase used to denote the account to be credited is "*moet hebben*", that is, must have, a translation of the German "*soll*", as used by Mennher. Both Pietersz. phrases are common to the VOC's accounting, as is his phraseology in the balance account.

Still evident in Pietersz. is the notion that, rather than the capital account representing the business, it was still treated as personal to the owner (Pietersz, 1635, folio 11; De Waal, 1927, p. 170). Other indications that the business and the owner were still not regarded as separate entities can be found in an entry for a quantity of linen sent to the owner's lawyer in anticipation of his good services, another is the account for house rent (1635, folio, 4, 11). Notwithstanding its shortcomings, and the similarities between his and Mennher's texts, Pietersz's work is regarded as the best of sixteenth century Netherlands' bookkeeping manuals (De Waal, 1927, p. 157). During the sixteenth century, the texts were used throughout northern Europe, from Poland to England, and ran to many editions. Three of the most influential Dutch writers of the late sixteenth and early seventeenth centuries, Mellema, Stevin, and Goessens relied on aspects of Pietersz.

Elcius Eduardus Leon Mellema and Passier Goessens were two of those who built on Mennher Pietersz. in the last decade of the sixteenth century. Mellema, a north Hollander, published *Boeckhouder na de consten van Italien, met twee partyen als Debiteur ende Crediteur* (1590), which was described as every bit as good as Pietersz's text (De Waal, 1927, p. 159). Mellema acknowledged Mennher as a source. However, he was the first to refer to the ledger as a grootboek, rather than the Germanic *Schuldboeck* (De Waal, 1927, p. 202). Goessens, a native of Brussels, published *Buchhalten fein kurtz zusammen gefast und begriffen nach arth und weise der Italianer* in German in 1594. He is thought to have relied on Pietersz' *Boeckhouwen op d'Italiaensche maniere* (1567) (De Waal, 1927, p. 159) but aspects of his text, such as numbering the journals, also resembles Mennher (Goessens, 1594). Furthermore, the structure of his journal entries is similar to Mennher's earlier publication. Goessens separated the debit and credit section with the word Sol, the amount, and Per. Curiously he used a larger font for the

debit section and a smaller one for the credit (Goessens, 1594, Journal folio 1). He was also familiar with Mellema's work as is evidenced by his rules for debit and credit that were copied from Mellema's *Boeckhouder na die coste* (Bywater and Yamey, 1982, p. 76). Geijsbeek (1974, p. 11) observed that, in contrast to the trend earlier in the century, Goessens's text meant that German accounting benefitted from Dutch accounting expertise at the end of the sixteenth century.

By the close of the sixteenth century the separation of owners and business entity was established, as Goessens's capital account is not referred to by personal name but simply as Capital. Ledger narrations were very succinct, with only the name of the contra account mentioned and without any description of the transaction. Like Mellema, Goessens employed a quantity column in the goods accounts, and refers to a *Haubtbuch*, that is, a *grootboek*, rather than the more dated *Schuldbuch*. On both sides of the ledger the narration for each posting begins with "*Per*", followed by the contra account's name but without any description of the transaction. Profit and loss is balanced and the excess transferred to Capital account (Goessens, 1594, folios 2, 14). After profit or loss has been transferred to Capital account, the balance on that account, together with the balances of all remaining open accounts is transferred to the Balance account in preparation for the closing of ledger A and the opening of ledger B (Goessens, 1594, p. folio 36). The Narration used in the balance account is similar to Pietersz. and that used by the VOC:

> The following nineteen debtors that are outstanding as at the 31st of December per balance of ledger No. A are made creditors, and in the new ledger No. B will once again made debtors (Goessens, 1594, folio, 36)[24].

Simon Stevin's *Vorstlicke bouckhouding*, first published in Amsterdam in 1604 was published shortly after the VOC was established in 1602. More importantly, because it successfully linked renaissance and modern closing procedures, Stevin's chapter on merchants' bookkeeping (*Coopmans Bouckhouding op de Italiaenshe wyse*) is generally considered to be the best explanation of sixteenth and early seventeenth century double-entry bookkeeping (Chatfield and Vangermeersch, 1996, p. 128)[25]. Stevin's purpose was to demonstrate his understanding of the concept of double-entry bookkeeping, rather than to describe the practice of the time. Nevertheless, *Coopmans Bouckhouding* retained an emphasis on factor's bookkeeping (Stevin, 1979, pp. 9, 31, 56-8; Kats, 1929b, p. 275)[26]. He considered the primary objective of merchant's bookkeeping was to know what profit or loss had been made on every individual item of stock. Accordingly, the merchant's bookkeeping system must reveal how much cash the cashier should be able to account for, and what stock of merchandise was entrusted to which employees or agents, and what the balances of outstanding debtors and creditors were (Stevin, 1979, p. 11). Stevin used the standard set of account books, comprising a memorial, journal and ledger but, like Pietersz., he still referred to a *Schultbouck*, rather than a *grootboek*. Stevin's innovative contribution was the calculation and independent confirmation of the profit by the "*Staetproef*" (Stevin, 1979, p. 35). First, Stevin required an annual *staet* or balance to be compiled to which the balances of cash, stock on hand and accounts receivable were transferred and totalled. From this sum he deducted accounts payable. The balance represented net capital. The difference between one year's net capital and another was the profit or loss

for the year. The similarities between Stevin's closing procedure and that suggested by Schreiber in 1525 are striking.

Over the intervening three quarters of a century between Schreiber and Stevin, details of structure and terminology had changed, journal and ledger notation had become more efficient, and the process for closing the books of account more clearly rationalised, but the only real practical innovation was that factor's bookkeeping gradually assimilated a clearer process of accounting for capital. This adaption was necessary because an escalation in the volume of trade and Dutch dominance of north-western Europe's trade after the middle of the sixteenth century undermined traditional Hanseatic organisation and business processes (Israel, 1990, pp. 4-5, 18, 20; De Vries and van der Woude, 1997, pp. 351-4, 366-8, 371-2). The increase in trade volumes, the variety of goods, and the distances involved, meant that northern merchants had to find a simpler way of organising themselves. As a result, a business association was no longer defined by an event, such as a consignment of merchandise, but structured as an entity in its own right. At the same time, Dutch dominance of the Baltic trade meant that traditional means of control, enforced by the Hanseatic cities, was eroded. Consequently, a reliance on the control provided by sound business ethics and brotherhood was replaced by mechanised accounting control.

Conclusion

Double-entry bookkeeping was fully developed by the early seventeenth century and could, conceivably, have been used in The Netherlands in the manner suggested by Sombart and Weber. However, Paciolian double-entry bookkeeping was rarely used in practice and, moreover, was not prized for its ability to report the rate of return on capital employed in the business. The evidence presented also demonstrated that German factor's bookkeeping was widely used in sixteenth century Netherlands and that the Dutch texts published at the end of the sixteenth century had their roots in early sixteenth century German bookkeeping manuals. Consequently, the organisation and accounting of advanced Dutch businesses must be understood in terms of the Hanseatic business model and German factor's accounting, rather than Italian double-entry bookkeeping. This paper substantiates Winjum's findings by establishing that in the northern Netherlands, the site of the most advanced business form in the early seventeenth century, scientific double entry bookkeeping was not used. Thus, it was not a prerequisite for the joint stock company and modern capitalism. The Venetian bookkeeping tradition of Pacioli continued to be little more than a curiosity until at least the late seventeenth century.

The Netherlands' close relationship with northern Germany meant that the Hanseatic merchants and German factor's bookkeeping dominated sixteenth century north-western European bookkeeping practices and texts. The Hanse's reliance on loose business associations and decentralised accounting systems (Posthumus, 1953, p. 28) centred on individual parcels of goods was transferred from Germany to The Netherlands. Any notion of accounting for an entity as a whole by means of a centralised accounting system was entirely foreign to both the sixteenth century north Germans and the Dutch. However, the reorganisation of traditional business structures and an increasing reliance on accounting controls forced the late sixteenth century merchants of north-western Europe to refine their accounting techniques. Effective control and commercial order, rather than a desire to rationally invest, were

responsible for the modification of traditional practices that required the adoption of an entity perspective and allowed a centralised accounting and the notion of business capital. Accordingly, while the concept of double-entry bookkeeping was fully developed by the early sixteenth century, and could have been used in the manner suggested by Sombart and Weber, in practice it was rarely used in the way they envisaged. Rather, it was the development of German factor's bookkeeping by which The Netherlands' business organisation and administration could best be understood.

The conclusions reached in this paper are used in a forthcoming paper to test Bryers's (2000b) hypothesis that the introduction of social capital necessitated the application of a capitalistic form of double-entry bookkeeping. To this end the VOC's archived bookkeeping records for the period covered by its first charter (1602-1622), together with its participants' response to the decision to make the company's capital permanent, and the participants' demands for a general accounting, are analysed to determine the validity of Bryers's thesis in a Netherlands context.

Notes

1. Double-entry bookkeeping represents the current accounting paradigm (Cushing, 1989, p. 13).
2. For the purposes of this paper bookkeeping, which can be limited to just the technique of recording financial data, and accounting, which can be considered to encompass both the recording and the reporting of financial matters, are treated as synonymous. The term "scientific" refers to an accounting system where the data is grounded in positive (empirically verifiable) monetary values. Moreover, because these values are homogeneous, the capital accounting process can be reduced to the mathematical formula: Assets = Liabilities + Owners' Equity (Nussbaum, 1937, p. 160; Scheerer, 1950, p. 66; Littleton, 1961, p. 74; Käfer, 1966, pp. 19-24; Ten Have, 1976, p. 102; and Mattessich, 2003, p. 133).
3. To distinguish the VOC from the English East-India Company or EEIC, English authors commonly referred to the Dutch company as the DEIC. This work refers to the Dutch company as the VOC.
4. The most important archival resources for the study of seventeenth century Dutch business have been preserved by The Netherlands' National Archive located in Amsterdam (Algemeen Rijksarchief or ARA). For the present paper, the limited material in the ARA (n.d.) relevant to the sixteenth century is accessed mainly through secondary sources. A subsequent paper which explores the accounting practices of the VOC and influences on these is based primarily on archival material in Amsterdam.
5. "Scientific", "systematic" and "capitalistic" double-entry bookkeeping are treated as synonyms. In addition to the basic requisite of a pair of opposing entries for every transaction posted to the accounting records, scientific bookkeeping adopts a owner's perspective of the firm and requires a regular, periodic calculation of overall profit and loss and a capital account representing the owners' investment in the business.
6. The accounting practices of the VOC in the early seventeenth century are examined in a subsequent paper.
7. Yamey (1949, pp. 105-6) summarised Sombart's position as follows:
   Double-entry bookkeeping [...] contains within its framework of accounts a systematic analysis of transactions, which, it is claimed by its advocates, enables it to produce a calculation of profit or loss, a calculation of capital employed, and a statement of the financial condition of the enterprise. It is particularly these special characteristics of double-entry that economic historians have singled out in their thesis that "scientific"

bookkeeping has acted as an initiator, energizer, or stimulant (according to individual emphasis) in the development of capitalism.

8. Ten Have (1976, p. 6) cited a definition from the Algemene Winkler Prins (1956) which stated that double-entry bookkeeping was the "systematic recording and processing of changes in the composition and magnitude of proprietorship". In terms of this definition, systematic bookkeeping required a strict duality of entries that related to a stated capital sum with the ultimate purpose of preparing periodic financial summaries. By contrast, Pacioli (1494, chapter 1, in Geijsbeek, 1974, p. 33) defined systematic bookkeeping more simply as the arrangement of all recorded transactions so that "one may understand each one of them at a glance, i.e. by the debit (debito – owed to) and credit (credito – owed by)".
9. Evidence from the seventeenth and eighteenth centuries indicates that the trend was for more businessmen to regularly balance their accounts and that this practice was motivated by a desire to know what changes had occurred in income and capital (Winjum, 1972, p. 233).
10. National boundaries were extremely vague notions in this age. One of the most powerful and influential businessmen of the second half of the fifteenth century, a resident of Hamburg, Hinrike von der Horst, was referred to as a Hamburger in the east, and as a Hollander in the west.
11. The Netherlands was commonly divided into northern and southern regions. South Netherlands comprised the area adjacent to the Schelde and included north Flanders. North Netherlands generally meant the Netherlands north of Rotterdam.
12. The terms "Upper" and "Lower" relate to geographic elevation. Lower or north Germany refers to an ill-defined region, sometimes called the Hanseatic Lands, which comprised the present northern Germany and most of the states bordering the Baltic and North Seas, and included north-west Russia, northern Poland, parts of Sweden, Finland, Estonia, Latvia, Lithuania, Denmark and the northern Netherlands. "Upper" or southern Germany was the region relatively adjacent to the Alps.
13. Hanseatic business organisations displayed "virtualisation" (Ewert and Selzer, 2001. p. 13) in that while they did not have a physical presence, they nevertheless provided many of the services and benefits of such an organisation. Despite their informal character, such networks could be quite and large and endure for many years. A successful merchant could be part of a business network of 40 associates that could endure for 22 years (Ewert and Selzer, 2001, p. 6).
14. Southern Germany is believed to have had less of an influence on The Netherlands; sixteenth century Augsburg, for example, is said to have had more in common with Venice than southern Netherlands (Brulez, 1959, p. 319).
15. That is, in bilateral form.
16. The term factor (Italian fattore) did not previously mean the same things as it does today. In the fourteenth century it referred to a firm's employee (it could include a partner) serving abroad, and who was entitled to a salary but not a share in profits. Factors who acted as managers normally also had power of attorney to allow them to act on behalf on the company (De Roover, 1948, pp. 32-3).
17. The earliest of the non-Paciolian German bookkeeping texts was a manuscript entitled Musterbuchhaltung prepared by Matthäus Schwarz in about 1518 (Von Weitnauer, 1931; Hartsough, 1932, p. 544). The manuscript described the peculiar Fugger's bookkeeping known as Dreierlay Buchhaltung or threefold bookkeeping, that was based on the traditional German system. In order to demonstrate the system's effectiveness Schwarz included examples of Venetian double-entry bookkeeping as a comparison, underscoring his expertise in both methods (Hartsough, 1932, pp. 242, 544; De Waal, 1927, p. 78).

18. As Schreiber pointed out, this "profit" represented the business's current capital. "Aber was sodann bleibt, ist nicht gewinn, sondern schlußkapital; gewinn wuerde es nur unter de voraussekung sein, wenn das gheschäft mit nichts begonnen worden waere" (Schreiber, 1544).
19. The objective of the exercise was to ensure that a new set of account books commenced on an accurate footing.
20. "Sulx dat Debiteurs, met ghereet ghelt en waren, hier meer bedraghen dan Crediteurs voor weerde des capitaels op den laesten van December 1600" (Stevin, 1979, p. 35).
21. The term "Welsh" or "Wellischen" means Italian (Geijsbeek, 1974, p. 10; Kats, 1929b, p. 282).
22. Geijsbeek (1974, p. 10) believed that both Gottlieb's Ein Teutsch verstendig Buchhalten (1531) and Schwiecker's Zwifach Buchhalten (1549) were poor copies of Pacioli and Manzoni.
23. Although Mennher had abandoned the split ledger, he still used the term schuldboek, rather than the later and more appopriate Hauptbuch or the Dutch grootboek, when referring to the general ledger (De Waal, 1927, pp. 134-5).
24. "Navolgende 19 Debitores denen mir dato ultimo Deembris Per Saldo der Bucher No, A. schuldig blieben werden alie zu Creditores. Und auff der Newen Rechung No, B. wiederumb zu Debitores gemacht." (Goessens, 1594, folio, 36).
25. Stevin not only insisted on annual balancing but, contrary to the usual practice of authors, his Summary, which listed the remaining assets and liabilities, was made outside the ledger.
26. Notably, he referred to Italian, not double-entry bookkeeping (Stevin, 1979, p. 9), and his balance did not include capital assets.

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